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09/938,039	08/23/2001	Karl W. Terry	7124.015	1958

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EXAMINER
ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

mk-2

Office Action Summary	Application No. 09/938,039	Applicant(s) TERRY ET AL.	
	Examiner Marc S. Zimmer	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-29,31 and 32* is/are rejected.

7)☒ Claim(s) *12,30 and 33-37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Specification

Applicants are required to reference parent application serial no. 09/553,583 which has evolved into U.S. Patent # 6,342,097.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 24 and 25 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6,342,097. This is a double patenting rejection. Claim 1 of the present application contemplates every aspect of the invention recited in claim 1 of the '097 document except the acidic colloidal silica and its amount. Claims 24 and 25, which depend from claim 1 add this limitation.

Claims 26-29 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 3-6 respectively of prior U.S. Patent No. 6,342,097. This is a double patenting rejection.

Claims 31 and 32 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 2 of prior U.S. Patent No. 6,342,097. This is a double patenting rejection. As in claims 24 and 25, these claims provide for the addition of acidic colloidal silica to a composition. In particular, they consider the incorporation of

acidic colloidal silica to the composition of claim 18 which, in turn, mentions the introduction of an additional organosilicon compound of specified constitution into the composition of claim 1. Claim 18 is equivalent to claim 2 of '097 save for the absence of an acidic colloidal silica component. Claims 31 and 32 add this limitation thus the compositions described therein contain all of the same features as claim 2 of '097.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawaragi et al., U.S. Patent # 5,314,947 in view of Takeshita et al., U.S. Patent # 6,057,039. Sawaragi discloses a coating composition for plastic materials offering a desirable combination of high refractive index and scratch resistance comprising:

(i) 100 parts by weight of an epoxy-functionalized silane, or partial condensate, adhering to the formula $R^1R^2_nSi(OR^3)_{3-n}$ wherein R is an epoxyalkyl group, R^2 symbolizes a (un)halogenated alkyl- or alkenyl radical, and "n" is an integer of zero to two,

(ii) 0 to 100 parts by weight of a second organosilicon compound, or partial condensate thereof, represented by the formula $R^4R^2_qSi(OR^3)_{4-p-q}$ wherein R^4 is on eof the substituent groups

outlined in column 2, lines 24-30,

(iii) 0 to 130 parts of *at least one* metal oxide selected from those based on aluminum, tin, or titanium,

(iv) 0.25 to 30 parts by weight of a polycarboxylic acid or anhydride derivative such as those named in column 3, lines 14-36, and

(v) 0.01 to 30 parts of a condensation catalyst.

As optional components, an acid hydrolysis catalyst, an organic solvent diluent, and a leveling agent, are particularly identified in column 4, lines 28-47. There is not, however, any mention of a disilane hence Sawaragi does not fully anticipate the claims.

Takeshita, like Sawaragi, describes a coating composition for rendering plastic articles resistant to a host of different destructive forces including heat, abrasives, and chemical agents. In addition to these attributes, the composition disclosed by Takeshita also possesses exemplary dyeing characteristics. Among the ingredients contemplated therein are materials equivalent to components (i), (iii), and (v) from the '947 reference. Additionally, Takeshita advocates the incorporation of a disilane conforming to the formula provided in column 2, lines 43. A more detailed description of these compounds is provided in column 4, lines 22-60. According to column 5, lines 18-25, the main benefits realized upon adding this compound are faster cure rates and a stronger affinity for dyes in the overall composition. In view of these expected improvements, it would have been obvious to modify Sawaragi's invention by adding a disilane.

It is acknowledged that, insofar as not all of the epoxy-functionalized silane, the metal oxide colloid, and the disilane are disclosed in the same reference, the ratio reported in claim 1 is, of course, not taught in either reference. However, Applicant has not demonstrated any particular criticality for this limitation. Indeed, the Specification states that the invention is suitably practiced using varied quantities of each of the aforementioned materials. Furthermore, Sawaragi and Takeshita expressly delineate the role of each of these compounds and the effect imparted by their inclusion. Accordingly, one of ordinary skill is capable of adjusting the amounts of each component as a matter of routine experimentation to arrive at a composition having the preferred balance of properties. "Where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (ie. does not require undue experimentation)." *In re Aller*, 105 USPQ 233. "Discovering an optimum value of a result effective variable involves only routine skill in the art." *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As for claim 7, no particular alcohol is disclosed by Sawaragi. Nonetheless, one of ordinary skill will appreciate that the alcohol should be one having few carbons so as to be fully miscible with the water used for hydrolysis.

As for claim 8, ethylene glycol monomethyl- or monoethyl ether is employed as the diluent in most of the Examples outlined in Sawaragi.

As for claim 9, where n=0 in the formula representative of component (i), the formula is equivalent to that set forth in the claim.

As for claims 13 and 19, it is perfectly within the ability of one having ordinary skill to identify a solvent system that will provides a homogeneous mixture of all materials. (This assumes, of course, that the materials have overlapping solubility profiles). Homogeneous mixtures are especially important in the present case because one substrate of interest is an optical lens. High clarity/transparency, which may only be obtained if the coating is homogeneous, is an essential physical trait of protective films for optical articles of manufacture. Likewise, one of ordinary skill can readily calculate the quantity of water needed to ensure the needed degree of conversion to hydrolysis products.

As for claim 18, component (ii) of Sawaragi's composition corresponds to this material.

Allowable Subject Matter

Claims 12, 30, and 33-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Each of the disilanes contemplated by Takeshita is required to feature at least one epoxide ring or a carbonate group in the fragment bridiging the two silicon atoms. None of the embodiments of R^{12} contain one or more of these groups.

Claims 24-29 and 31-32 would be allowable if rewritten to overcome the double-patenting rejection(s, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. While the prior art repeatedly teaches the addition of colloidal silica as a means of improving the abrasion resistance of a mixture,

there is nothing in Sawaragi that indicates that their composition is in need of further improvements with respect to this property. In any case, Nagashima et al., U.S. Patent # 5,013,788 and January, U.S. Patent # 4,355,135 are offered as evidence that it was already well-known that this property could be enhanced by adding colloidal silica.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

November 4, 2002

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700